

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of the claims in the application.

Listing of the Claims:

1 1. (currently amended) A process for stabilizing
2 the pH of a pulp suspension at a desired pH level,
3 characterized by increasing the alkalinity of said
4 paper making pulp suspension by adding thereto, in the
5 stock preparation of a paper machine in a paper mill, a
6 combination of an alkali metal hydroxide feed and a
7 carbon dioxide feed, each of said feeds being added in
8 an amount greater than what would be required to only
9 adjust the pH of the suspension to the desired pH
10 level, which feeds substantially counter each other's
11 pH changing effect, said feeds being provided in an
12 amount sufficient to achieve a significant buffering
13 effect of said pulp suspension while enabling
14 utilization of an excess of said hydroxide or said
15 carbon dioxide for adjusting the pH of said pulp
16 suspension and maintaining the pH at a desired level
17 from the addition of the feeds through the short
18 circulation and formation of the paper on the paper
19 machine.

1 2. (original) Process according to claim 1,
2 characterized in that the pH of said pulp suspension is
3 adjusted to a pH between about 7 and 9 by adding an
4 excess of said alkali metal hydroxide or by adding an
5 excess of said carbon dioxide.

1 3. (original) Process according to claim 1,
2 characterized in that said alkali metal hydroxide is
3 aqueous sodium hydroxide and said carbon dioxide is
4 gaseous carbon dioxide.

1 4. (original) Process according to claim 1,
2 characterized in that said alkali metal hydroxide is
3 fed to said pulp suspension prior to the feeding of
4 said carbon dioxide.

1 5. (original) Process according to claim 1,
2 characterized in that the alkalinity of said pulp
3 suspension is increased by providing a substantially
4 equal molar amount of alkali metal hydroxide and
5 dissolved carbon dioxide, said amount being sufficient
6 to provide a significant buffering effect and about pH
7 8.

1 6. (original) Process according to claim 1,
2 characterized in that said pulp suspension is chemical
3 or mechanical pulp.

1 7. (original) Process according to claim numeral
2 6, characterized in that said pulp suspension a is
3 bleached chemical pulp.

1 8. (previously presented) Process according to
2 claim 1, characterized in that said pulp suspension
3 contains calcium carbonate filler.

1 9. (original) Process according to claim 1,
2 characterized in that said alkali metal hydroxide and
3 carbon dioxide feeds are added to said pulp suspension
4 flowing in a pipe leading to a stock preparation tank.

1 10. (original) Process according to claim 1,
2 characterized in that said alkali metal hydroxide and
3 said carbon dioxide are combined prior to feeding to
4 the pulp suspension.

1 11. (currently amended) A process for producing
2 paper comprising providing a paper making pulp

3 suspension for processing in the stock preparation of a
4 paper machine in a paper mill;

5 increasing the alkalinity of said pulp suspension
6 in the stock preparation by adding thereto a
7 combination of an alkali metal hydroxide feed and a
8 carbon dioxide feed which feeds substantially counter
9 each others pH changing effect,

10 forming said pulp suspension into a web, and
11 drying said web to form paper,

12 said feeds being provided in an amount greater
13 than that required to adjust the pH of the pulp
14 suspension to a desired level, and said feeds being
15 provided in an amount sufficient to achieve a
16 substantial buffering effect of said pulp suspension
17 while enabling utilization of an excess of said
18 hydroxide or said carbon dioxide for adjusting the pH
19 of said pulp suspension and for maintaining the pH at a
20 desired level from the addition of the feeds ~~to~~ through
21 the short circulation and the formation of the pulp
22 suspension into a web.

1 12. (currently amended) Process according to
2 claim ~~14~~ 11, characterized in that the pH of said pulp
3 suspension is adjusted to a desired value between 7 and

4 9 by adding an excess of said alkali metal hydroxide or
5 said carbon dioxide.

1 13. (currently amended) A process for stabilizing
2 the pH of a pulp suspension at a desired pH level,
3 comprising the steps of

4 providing a paper making pulp suspension having an
5 initial pH for processing in the stock preparation of a
6 paper machine in a paper mill;

7 adding alkali metal hydroxide to the pulp
8 suspension in the stock preparation in a first amount
9 sufficient to adjust the pulp suspension to the desired
10 pH if the initial pH is lower than the desired pH;

11 adding carbon dioxide to the pulp suspension in
12 the stock preparation in a second amount sufficient to
13 adjust the pulp suspension to the desired pH if the
14 initial pH is higher than the desired pH;

15 adding alkali metal hydroxide to the pulp
16 suspension in the stock preparation in a third amount;
17 and

18 adding carbon dioxide to the pulp suspension in
19 the stock preparation in a fourth amount,

20 the third amount of metal hydroxide and the fourth
21 amount of carbon dioxide being provided in quantities
22 to substantially counter each other's pH changing

23 effect and to achieve a significant buffering effect of
24 the pulp suspension such that the pH of the suspension
25 is maintained at substantially the desired pH level
26 from the last addition of alkali metal hydroxide and
27 carbon dioxide ~~to~~ through the short circulation and the
28 formation of the pulp suspension into a web.